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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
09/174,624	10/19/98	MORANDO	J MJV-117-B

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IM22/0303

EXAMINER

KASTLER, S

ART UNIT

PAPER NUMBER

1742

DATE MAILED:

03/03/00

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Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.

09/174,624

Applicant(s)

MORANDO, JORGE

Examiner

Scott Kastler

Art Unit

1742

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claims ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- a) ☐ All b) ☐ Some * c) ☐ None of the CERTIFIED copies of the priority documents have been:
1. ☐ received.
2. ☐ received in Application No. (Series Code / Serial Number) ____.
3. ☐ received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. & 119(e).

Attachment(s)

- 14) ☒ Notice of References Cited (PTO-892)
- 15) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 16) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____.
- 17) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 18) ☐ Notice of Informal Patent Application (PTO-152)
- 19) ☐ Other:

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Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Thut in view of Mordue et al and Weber et al. Thut teaches a pump support member including a "leg structure" or shaft (128) surrounded by a refractory ceramic sleeve (130) showing all aspects of the above claims except the use of a refractory ceramic to adhere the sleeve (130) to the leg, or shaft (128), or the specific recitation that the shaft (130) is made of graphite. Mordue et al teaches, at col. 1 lines 46-55 for example that graphite protected by a refractory sleeve (col. 1 lines 52-54) is commonly employed for the construction of molten metal pump components. Weber et al teaches that it is known in the molten metal art to employ a refractory cement (7) in order to connect a refractory ceramic sleeve (5) to a carbon containing shaft, or main body (1). Because Thut requires some type of unspecified material for use as the shaft (128), motivation to employ graphite surrounded by a refractory sleeve to prevent premature erosion of the shaft, as taught to be commonly known in the molten metal pump art by Mordue et al, where the refractory is connected to the shaft by a refractory cement, as taught to be a commonly known expedient in the molten metal art by Weber et al, would have been modifications obvious to one of ordinary skill in the art at the time the invention was made.

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Claims 1-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mordue et al in view of Weber et al. As applied to claim 1 above, Mordue et al teaches, at col. 1 lines 50-60 for example, that it is well known in the molten metal pump art to employ a graphite leg or support surrounded by a refractory sleeve as a support post for a molten metal pump, thereby showing all aspects of the above claims except the use of a refractory cement for the purpose of connecting a refractory sleeve to a carbon containing base structure (the leg or support). Weber et al teaches that it is known in the molten metal art to employ a refractory cement (7) in order to connect a refractory ceramic sleeve (5) to a carbon containing shaft, or main body (1). Because the sleeve recited in Mordue et al would have to be connected to the support or leg in some manner, motivation to employ a refractory cement, as taught by Weber et al to achieve said connection, would have been an expedient obvious to one of ordinary skill in the art at the time the invention was made.

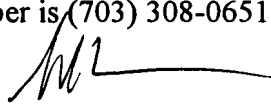
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Scott Kastler whose telephone number is (703) 308-2506. The examiner can normally be reached on Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Prince Willis can be reached on (703) 308-3050. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 305-7719 for regular communications and (703) 305-3599 for After Final communications.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0651.



Scott Kastler
Primary Examiner
Art Unit 1742

sk
February 29, 2000